

OK
center
get

Amendments to the Claims:

This listing of claims will replace all prior versions, and listing of claims in the application:

Listing of Claims:

Claims 1-14, 16, and 20 were previously cancelled by prior Office Action responses.

Claims 15, 17-19, and 21-29 are cancelled by the present Supplemental Office Action Response and Amendment.

New claims 30-55 have been added by this Supplemental Office Action Response and Amendment and are now pending.

30 (New) A system for providing expert critical care simultaneously to a plurality of geographically dispersed intensive care units (ICUs) from a remote location, the system comprising:

a network;

a plurality of geographically dispersed ICUs comprising means for monitoring patient data elements from a patient and means for transmitting the monitored patient data elements to a remote command center by the network;

the remote command center connected to the network and comprising:

a database, wherein the database comprises stored patient data elements relating to the patient;

a computerized patient care management system connected to a workstation, wherein the computerized patient care management system is adapted for:

receiving the monitored patient data elements from the plurality of geographically dispersed ICUs;

storing the monitored patient data elements in the database;

applying a rules engine to at least two patient data elements stored in the database; and

monitoring the medical condition in the patients and utilizing the output from the rules engine to determine if intervention is warranted; and

128

H

OK
to
enter
on

wherein the monitoring and intervention for individual patients in the plurality of geographically dispersed ICUs occurs 24 hours per day 7 days per week.

2
21. (New) The system of claim ~~30~~¹, wherein one of the at least two patient data elements comprises a physiological data element of the patient and another of the at least two patient data elements comprises a clinical data element of the patient.

3
32. (New) The system of claim ~~30~~¹, wherein one of the at least two patient data elements comprises a physiological data element of the patient and another of the at least two patient data elements comprises a medication data element of the patient.

4
33. (New) The system of claim ~~30~~¹, wherein one of the at least two patient data elements comprises a physiological data element of the patient and another of the at least two patient data elements comprises laboratory data element of the patient.

5
34. (New) The system of claim ~~30~~¹, wherein one of the at least two patient data elements comprises a clinical data element of the patient and another of the at least two patient data elements comprises laboratory data element of the patient.

6
35. (New) The system of claim ~~30~~¹, wherein one of the at least two patient data elements comprises a physiological data element of the patient and another of the at least two patient data elements comprises a physiological data element of the patient.

7
36. (New) The system of claim ~~30~~¹ wherein means for monitoring comprises monitoring equipment.

8
37. (New) The system of claim ~~36~~⁷ wherein the critical care site further comprises a nurses' station connected to the monitoring equipment and to the remote command center over the network.

9
38. (New) The system of claim ~~30~~¹ wherein the computerized patient care management system further comprises a data server/data warehouse for storing and analyzing data from the remote command center.

10
39. (New) The system of claim ~~30~~¹ wherein the computerized patient care management system is further adapted to:

receive information relating to a medical condition;
apply a decision support algorithm; and

129

H

one
page
open

provide a response based upon application of the decision support algorithm to the information.

11
40. (New) The system of claim 39 wherein the decision support algorithm comprises a guideline of practice relating to:

Acalculous Cholecystitis, Acute Pancreatitis, Acute Renal Failure Diagnosis, Acute Renal Failure-Management & Treatment, Adrenal Insufficiency, Agitation and Anxiety, Depression & Withdrawal, Aminoglycoside Dosing and Therapeutic Monitoring, an Amphotericin-B Treatment Guidelines, Analgesia, Antibiotic Classification & Costs, Antibiotics, Antibiotic associated Colitis, ARDS: Hemodynamic Management, ARDS: Steroid Use, ARDS: Ventilator Strategies, Asthma, Bleeding Patient, Bloodstream Infections, Blunt Cardiac Injury, Bradyarrhythmias, Brain Death, Bronchodilator Use in Ventilator Patients, Bronchoscopy & Thoracentesis Guidelines, Candiduria, Cardiogenic Shock, CardioPulmonary Resuscitation Guideline, Catheter Related Septicemia, a Catheter Replacement Strategies, Cervical Cord Injury, Congestive Heart Failure, COPD Exacerbation & Treatment, CXR (Indications), Dealing with Difficult patients and families, Diabetic Ketoacidosis, Dialysis, Diuretic Use, Drug Changes with Renal Dysfunction, Emergency Cardiac Pacing, Endocarditis Diagnosis and Treatment, Endocarditis Prophylaxis, End of Life Decisions, Endotracheal Tubes & Tracheotomy, Ethical Guidelines, Febrile Neutropenia, FUO, Fluid Resuscitation, Guillain-Barre Syndrome, Heparin, Heparin-Induced Thrombocytopenia, Hepatic Encephalopathy, Hepatic Failure, HIV + Patient Infections, Hypercalcemia Diagnosis and Treatment, Hyperglycemia Insulin Treatment, Hyperkalemia: Etiology & Treatment, Hyponatremia: Etiology & Treatment, Hypertensive Crisis, Hypokalemia: Etiology & Treatment, Hyponatremia: Etiology & Treatment, Hypothermia, Identification of Cervical Cord Injury, Implantable Cardio-defibrillator, Intra-Aortic Balloon Device, Intracerebral Hemorrhage, Latex Allergy, Magnesium Administration, Management of Hypotension, Inotropes, Management of Patients with Ascites, Empiric Antibiotics for Meningitis, Myasthenia Gravis, Myocardial Infarction, Myocardial Infarction with left bundle branch block, Necrotizing Soft Tissue Infections, Neuromuscular Blockers, Neuromuscular Complications of Critical Illness, Non-Infectious Causes of Fever, Non-Traumatic Coma, Noninvasive Modes of Ventilation, Nutritional Management, Obstetrical Complications, Oliguria, Open Fractures, Ophthalmic Infections, Organ Procurement Guidelines,

H

0/2/04

PA Catheter Guideline and Troubleshooting, Pancreatitis, Penetrating Abdominal Injury, Penetrating Chest Injury, Penicillin Allergy, Permanent Pacemaker and Indications, Pneumonia Community Acquired, Pneumonia Hospital Acquired, Post-Op Bleeding, Post-Op Hypertension, Post-Op Management of Abdominal Surgery, Post-Op Management of Carotid Surgery, Post-Op Management of Open Heart Surgery, Post-Op Management of Thoracotomy Surgery, Post-Op Myocardial Ischemia, Cardiac Arrhythmias after Non-Cardiac Surgery, Post-Op Power Weaning, Pressure Ulcers, Pulmonary Embolism Diagnosis, Pulmonary Embolism Treatment, Respiratory Isolation, Sedation, Seizure, Status Epilepticus, Stroke, Sub-Arachnoid Hemorrhage, Supra-Ventricular Tachyarrhythmia, Supra-Ventricular Tachycardia, Wide Complex QRS Tachycardia, Therapeutic Drug Monitoring, Thrombocytopenia, Thrombolytic Therapy, Transfusion Guidelines, Traumatic Brain Injury, Assessment of Sedation, Sedation, Septic Shock, Bolus Sliding Scale Midazolam, Short Term Sedation Process, Sinusitis, SIRS, Spinal Cord Injury, Steroid Replacement Strategy, Thyroid Disease, Transplant Infection Prophylaxis, Transplant Related Infections, Treatment of Airway Obstruction, Unknown Poisoning, Unstable Angina, Upper GI Bleeding Stress Prophylaxis, Vancomycin, Upper GI Bleeding Non-Variceal, Upper GI Bleeding Variceal, Use of Hematopoietic Growth Factors, Ventilator Weaning, Ventilator Weaning Protocol, Venous Thrombosis Diagnosis and Treatment, Venous Thromboembolism Prophylaxis, Ventricular Arrhythmia, Warfarin, Warfarin Dosing, and Wound Healing Strategies.

12. (New) The system of claim 30 wherein the computerized patient care management system further comprises order writing software means for providing knowledge-based recommendations and prescriptions for medication based upon the patient data elements.
13. (New) The system of claim 30 wherein the computerized patient care management system further comprises knowledge-based vital sign/hemodynamic algorithms.
14. (New) The system of claim 30 wherein the critical care site further comprises means for transmitting video and wherein the patient care management system is further adapted to receive video.
15. (New) The system of claim 30 wherein the critical care site further comprises means for transmitting audio and wherein the patient care management system is further adapted to receive audio.

H

OK
over
even

16 ~~45~~ (New) The system of claim ~~30~~¹ wherein the computerized patient care management system further comprises knowledge-based ventilatory algorithms.

17 ~~46~~ (New) A method for providing expert critical care simultaneously to a plurality of geographically dispersed intensive care units (ICUs) from a remote location comprising:
monitoring patient data elements of patients in a plurality of geographically dispersed ICUs;
communicating over a network the monitored patient data elements to a remote command center, the remote command center comprising a database and a workstation;
storing the monitored patient data elements in the database, wherein the database comprises stored patient data elements;
applying a rules engine to at least two patient data elements stored in the database to monitor the medical condition in the patients; and
utilizing the output from the rules engine to determine if intervention is warranted; and
wherein the monitoring and determining if intervention is warranted for individual patients occurs 24 hours per day 7 days per week.

18 ~~47~~ (New) The method for providing expert critical care simultaneously to a plurality of geographically dispersed ICUs from a remote location claim of ~~46~~¹⁷, wherein the method further comprises consulting a decision support algorithm selected from the group consisting of:
Acalculous Cholecystitis, Acute Pancreatitis, Acute Renal Failure Diagnosis, Acute Renal Failure-Management & Treatment, Adrenal Insufficiency, Agitation and Anxiety, Depression & Withdrawal, Aminoglycoside Dosing and Therapeutic Monitoring, an Amphotericin-B Treatment Guidelines, Analgesia, Antibiotic Classification & Costs, Antibiotograms, Antibiotic associated Colitis, ARDS: Hemodynamic Management, ARDS: Steroid Use, ARDS: Ventilator Strategies, Asthma, Bleeding Patient, Bloodstream Infections, Blunt Cardiac Injury, Bradyarrhythmias, Brain Death, Bronchodilator Use in Ventilator Patients, Bronchoscopy & Thoracentesis Guidelines, Candiduria, Cardiogenic Shock, CardioPulmonary Resuscitation Guideline, Catheter Related Septicemia, a Catheter Replacement Strategies, Cervical Cord Injury, Congestive Heart Failure, COPD Exacerbation & Treatment, CXR (Indications), Dealing with Difficult patients and families, Diabetic Ketoacidosis, Dialysis, Diuretic Use, Drug Changes with Renal Dysfunction, Emergency Cardiac Pacing, Endocarditis Diagnosis and Treatment,

H

one
copy
only

Endocarditis Prophylaxis, End of Life Decisions, Endotracheal Tubes & Tracheotomy, Ethical Guidelines, Febrile Neutropenia, FUO, Fluid Resuscitation, Guillain-Barre Syndrome, Heparin, Heparin-Induced Thrombocytopenia, Hepatic Encephalopathy, Hepatic Failure, HIV + Patient Infections, Hypercalcemia Diagnosis and Treatment, Hyperglycemia Insulin Treatment, Hyperkalemia: Etiology & Treatment, Hyponatremia: Etiology & Treatment, Hypertensive Crisis, Hypokalemia: Etiology & Treatment, Hyponatremia: Etiology & Treatment, Hypothermia, Identification of Cervical Cord Injury, Implantable Cardio-defibrillator, Intra-Aortic Balloon Device, Intracerebral Hemorrhage, Latex Allergy, Magnesium Administration, Management of Hypotension, Inotropes, Management of Patients with Ascites, Empiric Antibiotics for Meningitis, Myasthenia Gravis, Myocardial Infarction, Myocardial Infarction with left bundle branch block, Necrotizing Soft Tissue Infections, Neuromuscular Blockers, Neuromuscular Complications of Critical Illness, Non-Infectious Causes of Fever, Non-Traumatic Coma, Noninvasive Modes of Ventilation, Nutritional Management, Obstetrical Complications, Oliguria, Open Fractures, Ophthalmic Infections, Organ Procurement Guidelines, PA Catheter Guideline and Troubleshooting, Pancreatitis, Penetrating Abdominal Injury, Penetrating Chest Injury, Penicillin Allergy, Permanent Pacemaker and Indications, Pneumonia Community Acquired, Pneumonia Hospital Acquired, Post-Op Bleeding, Post-Op Hypertension, Post-Op Management of Abdominal Surgery, Post-Op Management of Carotid Surgery, Post-Op Management of Open Heart Surgery, Post-Op Management of Thoracotomy Surgery, Post-Op Myocardial Ischemia, Cardiac Arrhythmias after Non-Cardiac Surgery, Post-Op Power Weaning, Pressure Ulcers, Pulmonary Embolism Diagnosis, Pulmonary Embolism Treatment, Respiratory Isolation, Sedation, Seizure, Status Epilepticus, Stroke, Sub-Arachnoid Hemorrhage, Supra-Ventricular Tachyarrhythmia, Supra-Ventricular Tachycardia, Wide Complex QRS Tachycardia, Therapeutic Drug Monitoring, Thrombocytopenia, Thrombolytic Therapy, Transfusion Guidelines, Traumatic Brain Injury, Assessment of Sedation, Sedation, Septic Shock, Bolus Sliding Scale Midazolam, Short Term Sedation Process, Sinusitis, SIRS, Spinal Cord Injury, Steroid Replacement Strategy, Thyroid Disease, Transplant Infection Prophylaxis, Transplant Related Infections, Treatment of Airway Obstruction, Unknown Poisoning, Unstable Angina, Upper GI Bleeding Stress Prophylaxis, Vancomycin, Upper GI Bleeding Non-Variceal, Upper GI Bleeding Variceal, Use of Hematopoietic Growth Factors, Ventilator Weaning, Ventilator

133

H

04
05
06
07
08
09
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100

Weaning Protocol, Venous Thrombosis Diagnosis and Treatment, Venous Thromboembolism Prophylaxis, Ventricular Arrhythmia, Warfarin, Warfarin Dosing, and Wound Healing Strategies.

19 ~~48~~ (New) The method for providing expert critical care simultaneously to a plurality of geographically dispersed ICUs from a remote location claim of ~~46~~¹⁷ further comprising:
storing data from the remote command center in a data server/ data warehouse;
analyzing the data from the command center; and
providing results of the analysis over a second network to the remote command center.

20 ~~49~~ (New) The method for providing expert critical care simultaneously to a plurality of geographically dispersed ICUs from a remote location claim of ~~46~~¹⁷ further comprising transmitting video from the critical care site via the network to the remote command center.

21 ~~50~~ (New) The method for providing expert critical care simultaneously to a plurality of geographically dispersed ICUs from a remote location claim of ~~46~~¹⁷, wherein applying a rules engine to at least two patient data elements stored in the database to monitor the medical condition in the patients comprises applying a rules engine to a physiological measure and a clinical data element of the patient.

22 ~~51~~ (New) The method for providing expert critical care simultaneously to a plurality of geographically dispersed ICUs from a remote location of claim ~~46~~¹⁷, wherein applying a rules engine to at least two patient data elements stored in the database to monitor the medical condition in the patients comprises applying a rules engine to a physiological data element of the patient and to a medication data element of the patient.

23 ~~52~~ (New) The method for providing expert critical care simultaneously to a plurality of geographically dispersed ICUs from a remote location of claim ~~46~~¹⁷, wherein applying a rules engine to at least two patient data elements stored in the database to monitor the medical condition in the patients comprises applying a rules engine to a physiological data element of the patient and a laboratory data element of the patient.

24 ~~53~~ (New) The method for providing expert critical care simultaneously to a plurality of geographically dispersed ICUs from a remote location of claim ~~46~~¹⁷, wherein applying a rules engine to at least two patient data elements stored in the database to monitor the medical condition in the patients comprises applying a rules engine to a clinical data element of the

H

3/2
2/2
2/2

patient and a laboratory data element of the patient.

25
34. (New) The method for providing expert critical care simultaneously to a plurality of geographically dispersed ICUs from a remote location of claim ~~46~~¹⁷, wherein applying a rules engine to at least two patient data elements stored in the database to monitor the medical condition in the patients comprises applying a rules engine to two physiological data elements of the patient.

35. 26 (New) The method for providing expert critical care simultaneously to a plurality of geographically dispersed ICUs from a remote location of claim ~~46~~¹⁷ further comprising transmitting audio from the ICU via the network to the remote command center.

H